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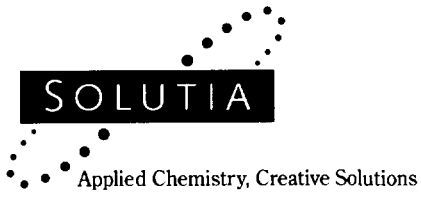


Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

P.O. Box 66760
St. Louis, Missouri 63166-6760
Tel 314-674-1000

September 28, 1999
(Via Federal Express)

Mr. Michael McAteer (SR-6J)
U. S. EPA - Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Re: January 21, 1999 Sauget Area I AOC
SSP Implementation
Submittal of Ecological Reconnaissance Results

Dear Mr. McAteer,

Pursuant to Section 11.1 of the Support Sampling Plan (SSP) approved by U. S. EPA on September 9, 1999, enclosed is the "Report on Ecological Reconnaissance for Sauget Area I" conducted September 20 through September 22, 1999, by Charles A. Menzie. As required by the SSP, this report is submitted for Agency acceptance.

Sincerely,

D. M. Light
Manager, Remedial Projects
Solutia Inc.

cc:
w/ enclosure
Tim Gouger
USACE
3rd Floor Building 525-Castle Hall
Offutt AFB, NE 68113

w/o enclosure
Bruce Yare - 6S

Report on Ecological Reconnaissance for Sauget Area I Dead Creek, Borrow Pit, and Reference Areas

Conducted September 20 through September 22

Prepared by:

Charles A. Menzie
Menzie-Cura & Associates, Inc.
Chelmsford, MA 01824

September 24, 1999

1.0 Introduction

The goals of the reconnaissance survey were to:

a) select ecological sampling stations in Dead Creek, Borrow Pit, and Reference Areas
b) evaluate fish sampling for tissue analysis
c) evaluate invertebrate sampling for tissue analysis
d) evaluate crayfish sampling for tissue analysis
e) evaluate plant sampling for tissue analysis.

The survey was carried out over a three-day period (September 20 – 22, 1999). Sample locations were identified by line of sight, were flagged with labeled tape, and positions were recorded using GPS. Menzie-Cura personnel included Charles Menzie and Katherine Fogarty. On September 21 and 22 we were accompanied by an employee of Weston (Mike Ondrachek) who served as a representative for the U.S. Environmental Protection Agency. The selection of sampling stations was discussed with Mr. Ondrachek throughout the effort.

This report provides an overview of observations for the survey and serves as a basis for proceeding with the main sampling event scheduled for the week of October 4, 1999.

2.0 Selection of Stations

The primary purpose for the survey was to select stations for the collection of surficial sediments, biological samples, and toxicity testing. The following criteria were applied for Dead creek segments B, C, D, E, and F:

a) provide spatial coverage by locating stations near the upstream end of the segment, near the middle, and near the downstream end (three locations);
b) presence of depositional sediments as indicated by mud and/or fine sand;
c) presence of at least a few inches of water in order to insure that aquatic invertebrate life can exist.

The following criteria were applied to the Borrow Pit:

a) provide spatial coverage by locating stations to the north of where Dead Creek enters the Borrow Pit, near the mouth of Dead Creek, and to the south of where Dead creek enters the Borrow Pit.
b) presence of depositional sediments as indicated by mud and/or fine sand;
c) presence of at least a few inches of water in order to insure that aquatic invertebrate life can exist.

The following criteria were applied for the selection of Reference Areas:

a) locations should be physically similar to either Dead Creek or the Borrow Pit;
b) locations should be away from the direct influence of industrial discharges, including major highways.

On the basis of the above criteria, three stations were selected in each of the Creek Segments, three general stations were selected in the Borrow Pit, and two Reference Areas were selected. These are listed in Table 1 and shown in Figures 1 - 4.

Table 1. Locations of ecological sampling stations based on reconnaissance survey.

Station	Narrative	Longitude/Latitude
CS-B-1	Northern most location of continuous water in Segment B	90° 10' 19.850" 38°35' 19.215"
CS-B-2		90° 10' 21.121" 38°35' 13.033"
CS-B-3		90°10' 23.190" 38° 35' 08.505"
CS-C-1	Shallow muddy pools with duckweed	90°10' 28.067" 38°35' 01.859"
CS-C-2		90°10" 29.508" 38°35' 00.365
CS-C-3	Caught two tiny sunfish in D-Net	90°10' 39.28" 38°34' 53.42"
CS-D-1	Observed many tiny snails and fish	90°10' 38.373" 38°34' 51.527"

Station	Narrative	Longitude/Latitude
CS-D-2	Located North of Kinder St.	90° 10' 40.122" 38° 34' 49.249"
CS-D-3	Located just south of Kinder St.	Not Taken
CS-E-1	Located about 200' south in E	90° 10' 44.344" 38° 34' 37.040"
CS-E-2	Just south of where JayCees Driveway crosses over creek	90° 10' 47.391" 38° 34.667"
CS-E-3	Located at south end of E and 20' north of where the creek passes into a culvert under the park parking lot	90° 10' 55.4727" 38° 34' 22.1548
CS-F-1	Located downstream of the Cargill crossing and above where the wetland discharges	90° 11' 40.485" 38° 34' 19.428"
CS-F-2	Located downstream of where wetland comes in and well into woods; water flow is from wetland; small fish observed	90° 11' 44.809" 38° 13.637"
CS-F-3	Located 75' upstream of confluence of F with Borrow Pit	90° 12' 10.603" 38° 34' 02.8476"
BP-1	Can be approached from Cargill Rd. – Open water area approximately 300' south of exposed mud bank; station would be located equidistant from west and east shores	Not Taken

Station	Narrative	Longitude/Latitude
BP-2	Located off where CS-F empties into BP; can be also located as the point where high tension wires cross the BP; station would be located equidistant from west and east shores	Not Taken
BP-3	Located about 300' south of BP-2; station would be located equidistant from west and east shores	Not Taken
Ref Area 1: Location 1	Old Prairie DuPont Creek west of Levee; under jurisdiction of Prairie DuPont Levee Sanitary District; is reached by taking the Levee Rd	90° 13' 43.791" 38° 32' 57.865"
Ref Area 1: Location 2	Located south of 1 at intersection of Levee Rd and State St.	90° 14' 03.025" 38° 32' 39.518"
Ref Area 2:	This is a slough located south of Cahokia area; it is near the end of Taake Rd and on the river side of Levee	90° 17' 22.161" 38° 24' 53.831"

We have included a number of pictures in this report to provide the reader with a feel for conditions within Dead Creek, the Borrow Pit, and the Reference Areas. These are provided in Attachment A.

3.0 Evaluate fish sampling for tissue analysis

We observed fish in all creek segments. At least three species were seen and a few small sunfish were caught with the D net. On the basis of these observations, we will plan to sample for fish in each of the creek segments.

Based on the physical conditions in the creek segments and in the Borrow Pit, we plan to use the following gear: a) seines will be the primary sampling device in creek segments due to shallow water depths and they will also be used in the Borrow Pit and Reference Areas; b) trot lines and traps will be used to catch catfish in the Borrow Pit and in the Reference Areas; c) gill nets may be used in the Borrow Pit and in Reference Area 2.

4.0 Evaluate invertebrate sampling for tissue analysis

The bottom sediments are soft and muddy. Using D-Nets we did not observe larger invertebrates such as dragonfly larvae. However, we did observe snails on the sediment surface. There appear to be enough of these animals available to provide sufficient sample size for tissue analysis.

5.0 Evaluate crayfish sampling for tissue analysis

We deployed a minnow trap baited with bacon for one night and also for one day. We did not collect any crayfish but did catch a small shrimp. We will need to evaluate sampling methods. Because of the shallow nature of the creek segments, seines are probably the best method to use there and we will use this method to determine if crayfish are present.

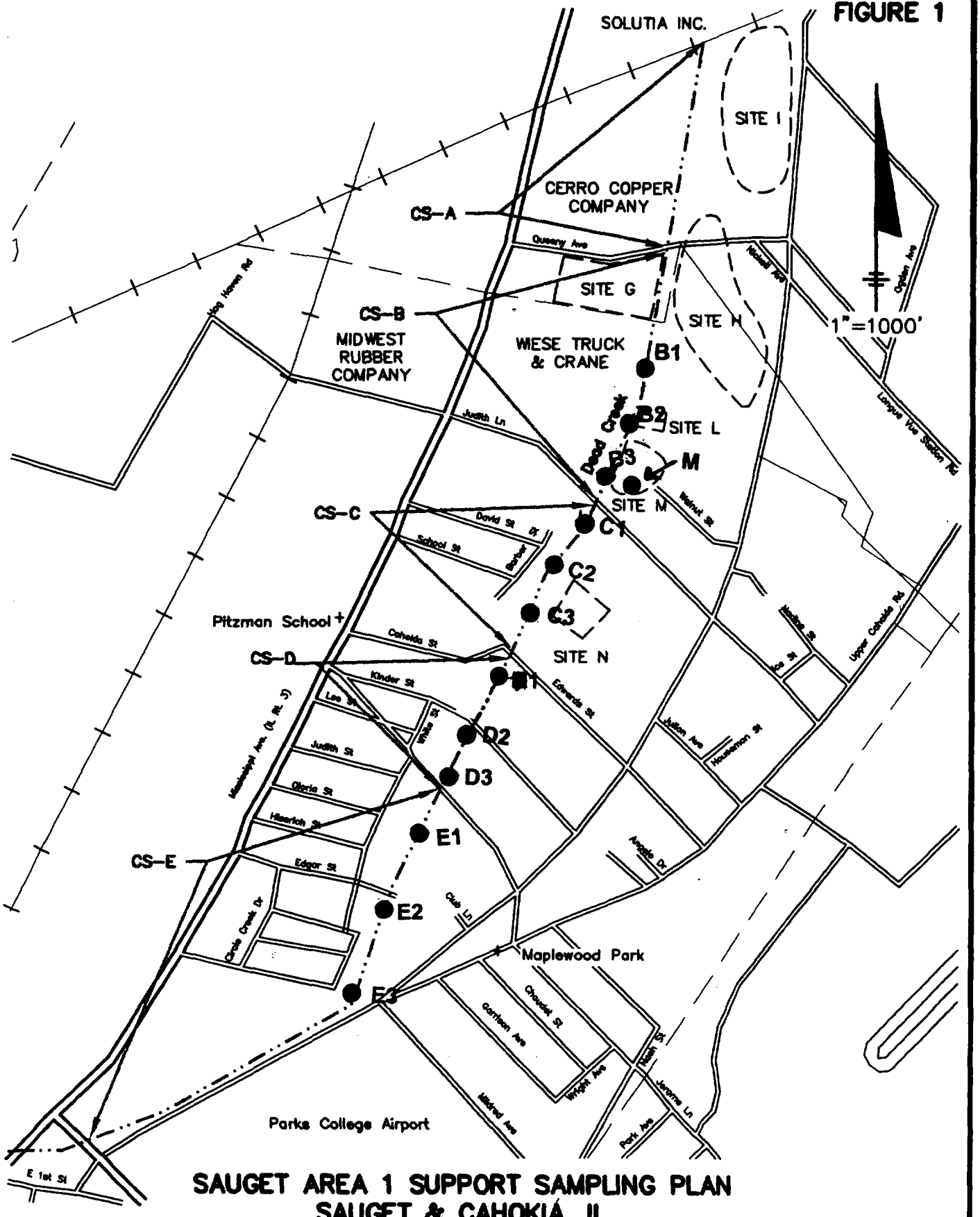
We will plan to use traps in the Borrow Pit as well as seines.

6.0 Evaluate plant sampling for tissue analysis.

We observed few emergent and submergent plants in the creek and Borrow Pit. There was shoreline vegetation associated with shoreline soils. In a few places we observed cattails and arrowheads. A submergent plant species was observed in Segment B. However, for the most part aquatic vegetation was not present.

A vine-like plant grows on the creek muds in areas where water has receded. This is one of the most common plants in the creek and therefore a good candidate for sampling.

FIGURE 1



SAUGET AREA 1 SUPPORT SAMPLING PLAN
SAUGET & CAHOKIA, IL

FILL AREA & CREEK SECTOR LOCATION MAP

23548.010.05
3/29/99

Approximate Sediment Location for Ecological Sampling

ENGINEERS INC.

PLOT DATE: /1/99

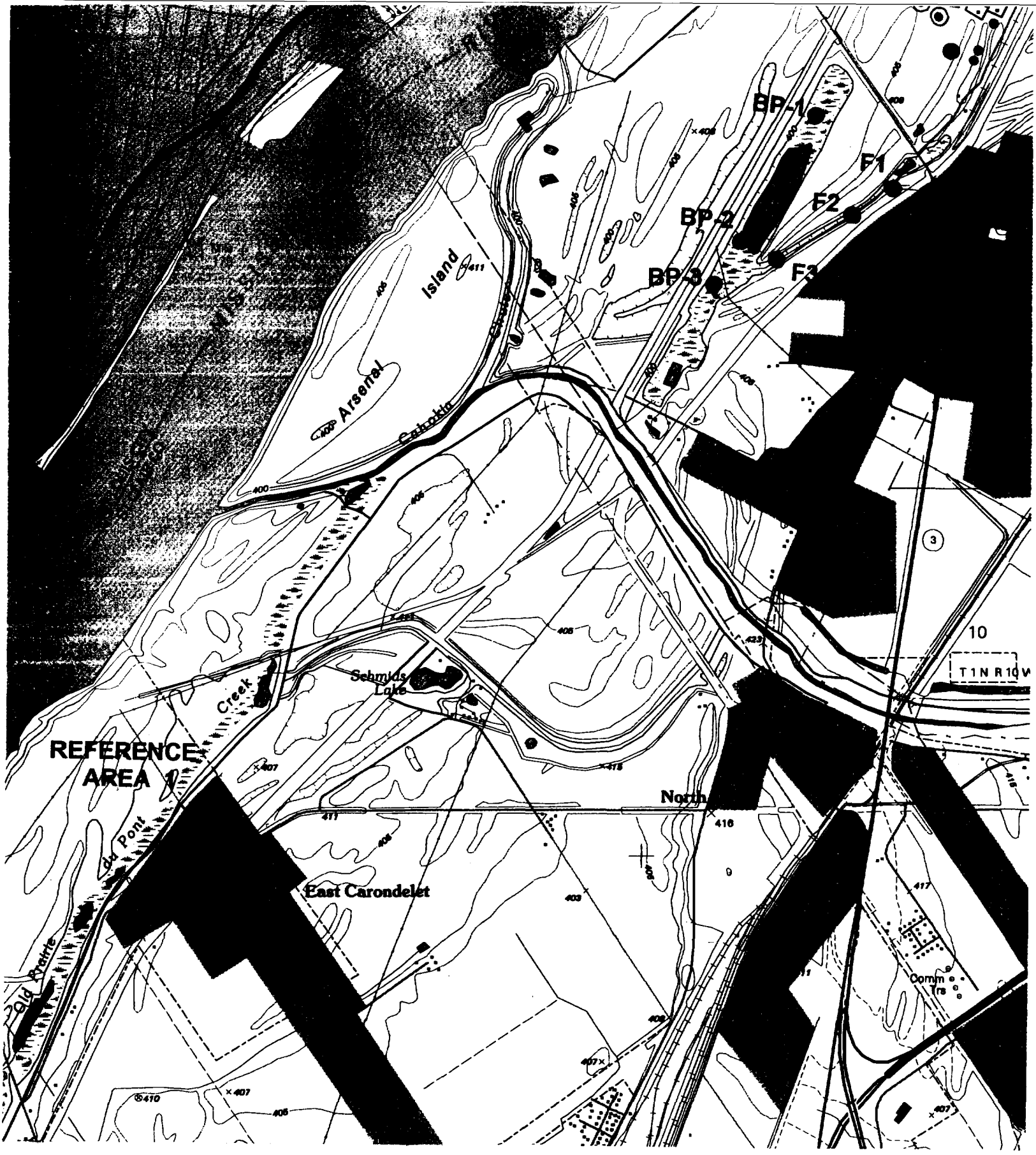


Figure 2. Segment F, Borrow Pit, and Reference Area 1

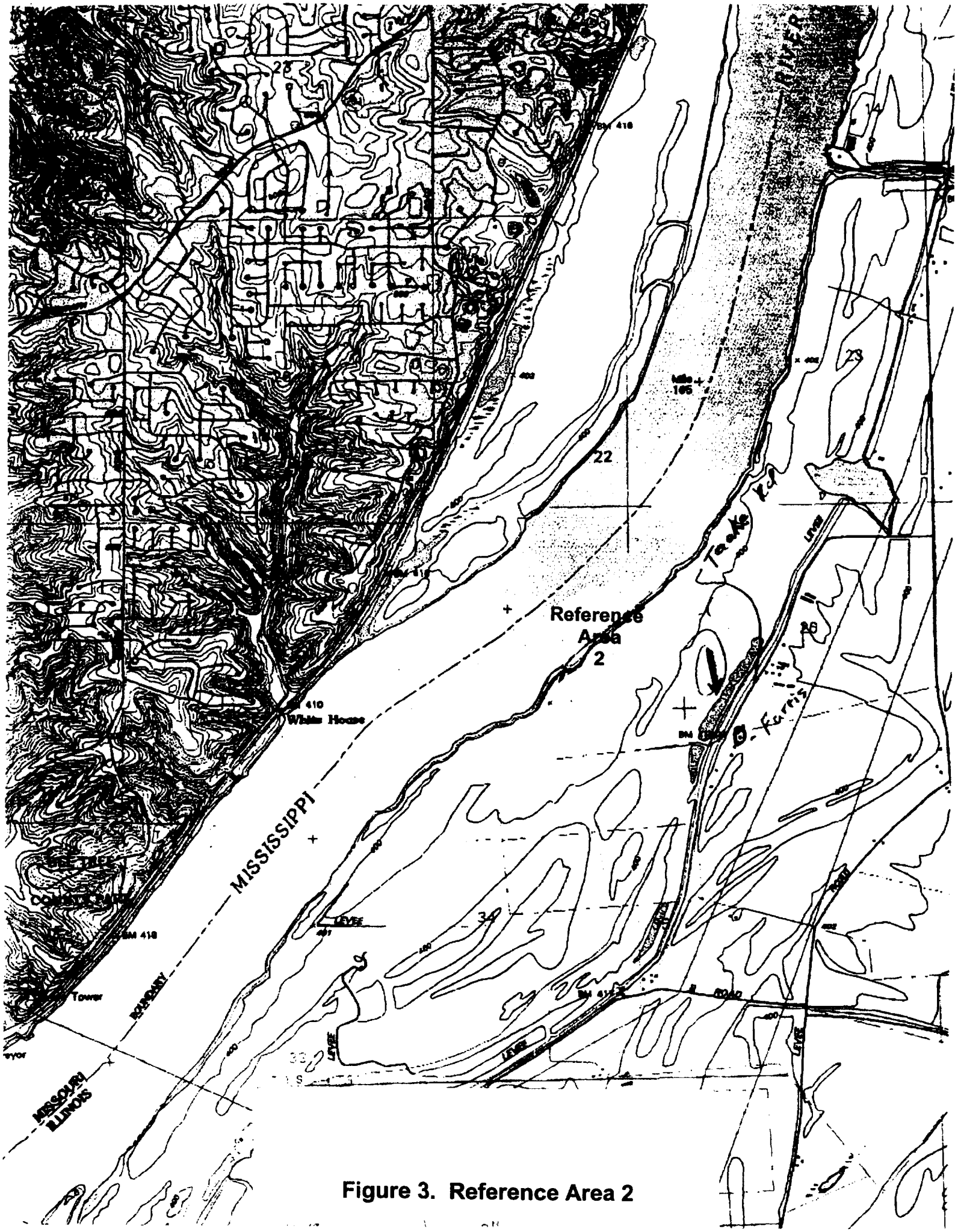
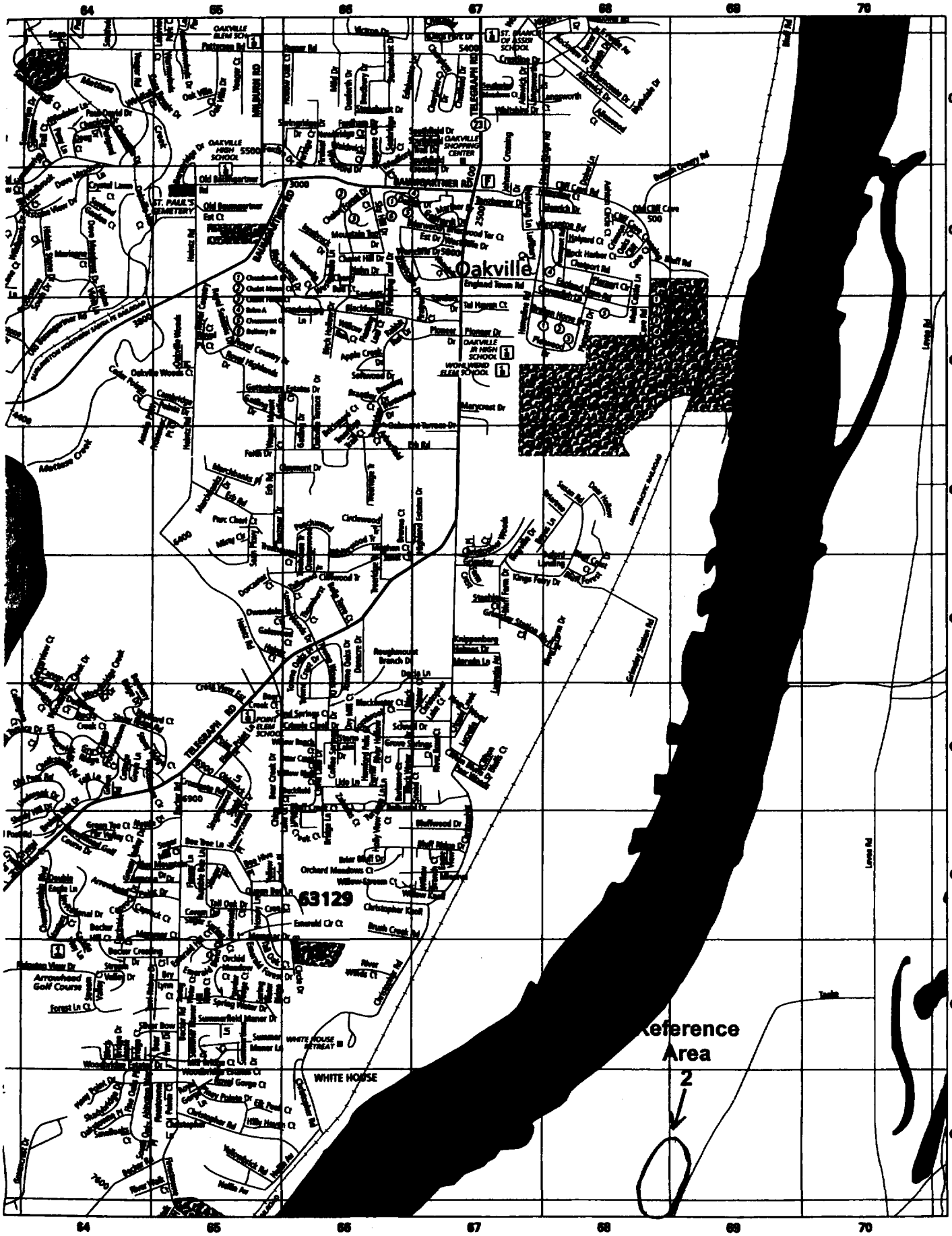


Figure 3. Reference Area 2

Figure 4. Reference Area 2
Rand McNally Map 103



Attachment A: Site Photographs

Creek Segment B at North End

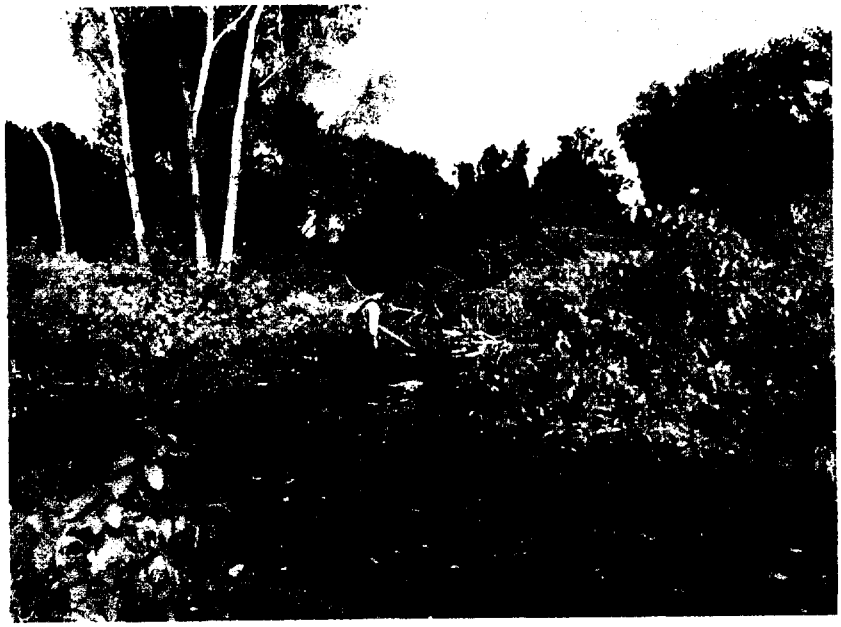
Oil Stained Sediment at North End of B

Creek Segment B photos

Creek Segment C Photos Showing Vegetation

Creek Segment E Photos

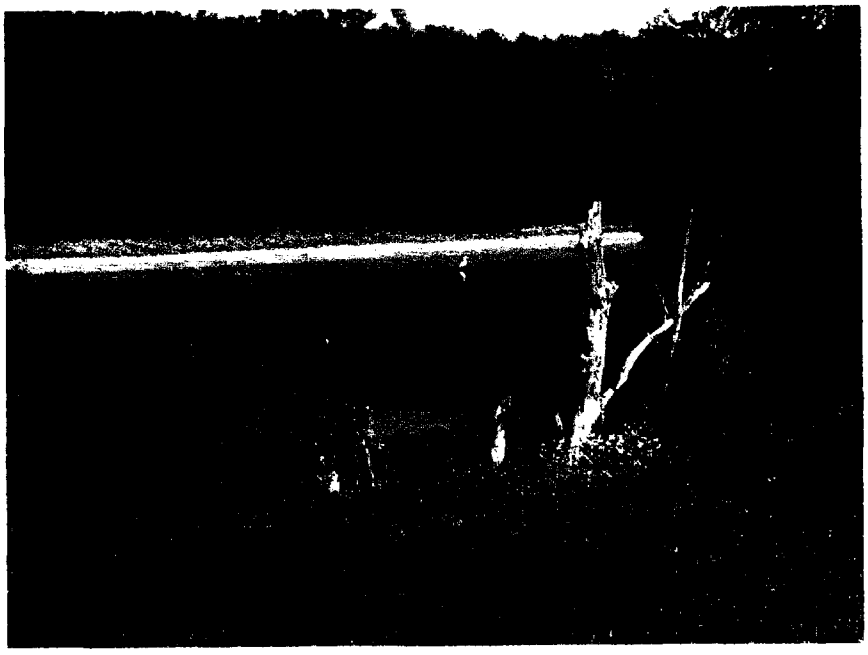
Segment F (heavily vegetated)



Segment F Joins the Borrow Pit

Reference Area 1 (Old Prairie DuPont Creek)

Reference Area 2 (Similar to Borrow Pit)



Flow of water from Phillips Pipeline across Cargill Rd toward Segment F

Spillage of herbicides or pesticides south of Borrow Pit. Dead Creek passes through soybean fields where agricultural chemicals are likely present.